

ABSTRACT

Disclosed is a method for manufacturing a semiconductor device which comprises a film-thinning step for thinning a silicon oxide film, which is formed after etching a silicon substrate surface with a chemical solution, by heating, and a thermal oxidation step for oxidizing the thinned silicon oxide film by heating while using a gas containing at least oxygen or a step for oxidizing the thinned silicon oxide film using a plasma-discharged gas containing at least oxygen.